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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
EGAN, BRIAN P	
ART UNIT	PAPER NUMBER

1772

DATE MAILED: 03/27/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/918,652

Applicant(s)

SU ET AL.

Examiner

Brian P. Egan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,9 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,9 and 11-14 is/are rejected.
- 7) ☒ Claim(s) 12-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 12-14 contain method limitations in relation to both the method of forming the article and the method of testing the article. Specifically, Claim 12 recites the limitation, “wherein the support layer and the release layer are deposited substantially simultaneously,” and Claims 13-14 recite the limitation, “wherein the 90° peel release force measured on a TLMI Lab Master instrument at a rate of 7.62 m/min is less than about 40 [and subsequently 20 in Claim 14] cN/25mm.” Although these claims are not per se rejectionable under 35 U.S.C. 112, second paragraph, the methods of forming and testing the article are not germane to the issue of patentability of the article itself. Therefore, these limitations have not been given patentable weight. Appropriate clarification and/or correction are required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 9, and 11-12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Reed (#5,229,212).

Reed discloses a multilayer release liner comprising a backing (“paper and paperboard”; Col. 7, lines 49-50), a support layer covering the backing (“precoated with a suitable coating such as clay”; Col. 7, lines 50-52), and a silicone-containing layer covering the support layer

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(Col. 7, lines 49-50). Reed further discloses that in the preferred embodiment, the silicone release composition is an aqueous dispersion containing from 10 to 98% by weight of a curable silicone, about 1 to 10% by weight of a crosslinking catalyst, and about 0.01 to 30% by weight of a water soluble polyethylene oxide (Col. 4, lines 45-52) – thus, Reed discloses that the solids of the release layer are formed in part of silicone, and depending on the desired end product, may be formed by substantially all silicone (upwards of 98%). Reed discloses functionally equivalent methods to those of the Applicants of applying the silicone layer to the backing layer, including curtain coating (Col. 6, lines 61-66), but note, however, that the method of forming has not been given patentable weight. Reed discloses that the silicone coating is coated with a coat weight as low as possible without sacrificing the efficacy for cost effectiveness (Col. 7, lines 6-8) and that the use of the polyethylene oxide as a “polymeric thickener” in the silicone emulsion has shown enhanced holdout properties -- “holdout” referring to the amount of the silicone which does not penetrate into the porous substrate and remains on the surface of the substrate to serve as a release coating (Col. 7, line 59 to Col. 8, line 14). Specifically, Reed discloses that the release surface comprises between 54 and 81% of the silicone (see Table 3; Col. 10, lines 14-23). Therefore, since over 50% of the silicone is contained within the release surface, the liner inherently exhibits a non-linear distribution of silicone and the most silicone that may possibly be contained at the first micrometer depth below the release surface is 46% -- thus, the release liner is non-linear throughout the release liner and a lower amount of silicone is present in each successive 1 micrometer depth. This non-linearity is hypothesized to occur based on the polyethylene oxide bonding to hydrogen bonding sites of the substrate and reducing the penetration of the silicone into the substrate (Col. 8, lines 2-4) thereby creating a funnel-like

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distribution of the silicone such that a substantial amount of the silicone remains at the top and the silicone concentration begins to taper off towards the bottom of the support layer.

Ultimately, the release liner is further incorporated into a pressure-sensitive adhesive label construction (Col. 9, lines 9-14).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reed (#5,229,212).

Reed teaches a multilayer release liner as detailed above. Reed further teaches that the peel release force is measured with a 140° release test wherein the sheet was pulled on an Instron instrument at 8 inches per minute (Col. 9, lines 16-21). Since the aforementioned testing procedure is not equivalent to that disclosed by the Applicant, it is unascertainable whether the liner in Reed teaches an equivalent release property value to that claimed by the Applicant. Based on the material disclosures along with the functionally equivalent method of forming and anticipation of the high concentration of silicone on the release surface, however, the release force values are inherently the same. Even if not inherently equivalent, Reed teaches that the release properties of the coated paper are a function of the amount of silicone remaining on the surface of the paper (Col. 10, lines 30-33) which may be modified based on the coat weight and

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composition of the silicone coating. Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified either the coat weight or composition taught by Reed such that the release properties of the liner fell within the Applicant's claimed range, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

### ***Response to Remarks***

6. Applicant's arguments with respect to claims 1-5, 9, and 11-14 have been considered but are moot in view of the new ground(s) of rejection.

7. The Examiner notes that pursuant to the Applicant's amended claims, the 35 U.S.C. 112, second paragraph rejections from the previous office action are withdrawn. It is further noted, however, that the previously rejected method limitations remain objectionable as detailed above.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Egan whose telephone number is 703-305-3144. The examiner can normally be reached on M-F, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

BPE  
March 21, 2003



HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

3/24/03